

## **AMENDMENTS TO THE CLAIMS**

This listing of claims replaces all prior versions, and listings, of claims in the application.

### **Listing of Claims:**

1. (original) A method for determining vascular characteristics for early detection of cardiovascular disease including the steps of:
  - (i) acquiring velocity displacement data from arterial colour tissue Doppler imaging;
  - (ii) processing the velocity displacement data to generate arterial displacement data;
  - (iii) adjusting the arterial displacement data using blood pressure data; and
  - (iv) analysing the adjusted arterial displacement data to characterise vascular function.
2. (original) The method of claim 1 wherein the step of processing the velocity displacement data includes integrating velocity displacement data with respect to time.
3. (original) The method of claim 1 wherein the step of processing the velocity displacement data includes using a readable spreadsheet for integrating velocity displacement data with respect to time.

4.(currently amended) The method of claim 1 wherein the step of adjusting the arterial displacement data includes dividing said arterial displacement data by ~~the~~ a cuff blood pressure to obtain corrected displacement data.

5. (currently amended) The method of claim 1 wherein the step of analysing the adjusted arterial displacement data includes generating local elasticity data by correcting the arterial displacement data by dividing said arterial displacement data by ~~the~~ a log of ~~the~~ a cuff blood pressure.

6. (currently amended) An apparatus for determining vascular characteristics for early detection of cardiovascular disease comprising:

an ultrasonic signal source directing ultrasound signals at an artery;

an ultrasonic signal receiver receiving ultrasound signals reflected from or transmitted through the artery;

~~means~~ software for analysing signals received by the ultrasonic signal receiver to extract arterial displacement data;

~~means for acquiring blood pressure data;~~

~~signal processing~~ means software for adjusting said arterial displacement data using ~~the~~ blood pressure data; and

~~means~~ software for analysing the adjusted arterial displacement data to characterise vascular function.

7. (currently amended) The apparatus of claim 6 wherein the ~~means~~software for analysing signals received by the ultrasonic signal receiver includes ~~means~~software for integrating velocity displacement data with respect to time.

8. (currently amended) The apparatus of claim 6 wherein the ~~means for acquiring~~ blood pressure data ~~includes a means for measuring~~ comprise diastolic and mean brachial cuff blood pressure data.

9. (currently amended) The apparatus of claim 6 wherein the ~~means for acquiring~~ blood pressure data ~~includes~~are acquired using a manometer for measuring diastolic and mean brachial cuff blood pressure data.

10. (currently amended) The apparatus of claim 6 wherein the ~~means~~software for analysing the adjusted arterial displacement data includes ~~a means of~~software for generating vascular function data in the form of local elasticity data.

11. (currently amended) The apparatus of claim 10 wherein the ~~means of~~software for generating ~~local elasticity data~~vascular function data includes ~~a means~~software for correcting adjusted arterial displacement data with ~~the~~a log of the ~~cuff~~ blood pressure data.

12 - 13. (cancelled)

14. (new) An apparatus for determining vascular characteristics for early detection of cardiovascular disease, comprising:

an ultrasonic signal source for directing ultrasound signals at an artery;

an ultrasonic signal receiver for receiving ultrasound signals reflected from or transmitted through the artery; and

a processor operatively coupled to the ultrasonic signal receiver for:

analysing signals received by the ultrasonic signal receiver to extract arterial displacement data;

adjusting said arterial displacement data using blood pressure data; and

analysing adjusted arterial displacement data to characterise vascular function.

15. (new) The apparatus of claim 14 wherein analysing signals received by the ultrasonic signal receiver comprises integrating velocity displacement data with respect to time.

16. (new) The apparatus of claim 14 wherein the blood pressure data comprise diastolic and mean brachial cuff blood pressure data.

17. (new) The apparatus of claim 14 further comprising a manometer operatively coupled to the processor for measuring diastolic and mean brachial cuff blood pressure data.

18. (new) The apparatus of claim 14 wherein analysing the adjusted arterial displacement data comprises generating vascular function data in the form of local elasticity data.

19. (new) The apparatus of claim 18 wherein generating vascular function data comprises correcting adjusted arterial displacement data with a log of cuff blood pressure data.